Iowa Department of Transportation

MINUTES OF SPECIFICATION COMMITTEE MEETING

August 1, 2002

Members Present:	John Adam, Director	Statewide Operations Bureau
	Tom Reis, Chair	Specifications Section
	Roger Bierbaum	Contracts
	Jim Berger	Office of Materials
	Larry Jesse	Office of Local Systems
	Mike Kennerly	Office of Design
	Bruce Kuehl	District 6-Dist. Const. Engineer
	Doug McDonald	District 1-Resident Const. Engineer
	Keith Norris	District 2-Dist. Materials Engineer
	Gary Novey	Office of Bridges and Structures
	John Smythe	Office of Construction
Members Not Present:	Steve Gent	Office of Traffic and Safety
From FHWA:	none	
Others Present:	Donna Buchwald, Secretary	Specifications Section
	Kevin Jones	Office of Materials
	Will Stein	Office of Design
	Francis Todey	Office of Design

Tom Reis, the Specifications Engineer, opened the meeting. The following items were discussed in accordance with the July 25, 2002, agenda:

1. CAST Update

a. Values

No change from previous meeting.

b. Progress Reports

1. Project Supervision: John Smythe

The Department met with representatives from several contractors last week to explain the proposed Contractor Quality Management process. The Department is basically taking the process the Corp. of Engineers has been using for several years but eliminating some of the administrative burden. The new process was well received by the contractor in attendance. The Quality Assurance part of the process was also explained and the contractors were open to the idea also.

It is the Department's intent to test this process on a project in next years construction season. A training session will be developed and training of the contractor's personnel will be performed this winter.

2. Pre-letting: Francis Todey/Tom Reis

Several paving contractors have contacted the Department because they do not believe the On-Call Patching contracts are being utilized the way they were initially intended. It was intended to provide Districts with the ability to get patching done on problem areas usually on small areas, 300 square yards (250 m^2) or less, where there is not enough time to process the work though the Departments letting process. It was not to be used on emergency work (i.e. blow ups) because the Office of Maintenance is to be taking care of those. It also was not intended to replace MP projects, but because of the reduction in the quantity of MP projects being let, it is believed that this might be some of the reason for the problem. Some contractors have had to refuse the work because of their work load.

The Committee discussed putting a size limit on these projects, but decided not to at this time.

Other areas of work the Department is going to investigate utilizing this process include guardrail repairs, minor bridge repairs, and lighting.

3. Materials and Audits: Kevin Jones

A Developmental Specification (DS) for Quality Management - Structural Concrete (QM-SC) has been developed and will be applied to a few projects in next year's construction season. The concept of the QM-SC DS is on projects over 60 cubic yards (50 m^3) the Contractor will be required to provide a PCC Level I Certified Technician run the slump and air entrainment tests, and document the results.

District 2 has been using the new audit forms and appear to be working very well.

4. Plan Improvement Team: Roger Gould/Tom Reis

The Department is continuing to work on changing items over to plan quantity items for the April 2003 General Supplemental Specification.

5. Technology and Innovation: Tom Reis

No change from previous meeting.

6. Training: John Smythe

Training is being developed for Project Supervision (see Item 1,b,1).

c. Work Plan, Milestones, and Time Line

No change from previous meeting.

d. Communication

1. Industry

(See Item 1,b,1)

2. Employees

No change from previous meeting.

3. Counties & cities

No change from previous meeting.

e. Miscellaneous

No comments.

2. Article 2303.01, DESCRIPTION

The Office of Materials requests a change to Article 2303.01 that will clarify who is responsible for mix designs when small quantities are involved.

Submitted by: Kevin Jones/John Hinrichsen **Office:** Materials **Date:** 7-18-02

Proposed Effective Date: April 2002

Article No.: 2303.01 **SS No.:** **Other:**

Change (Redline/Strikeout): Change the fourth paragraph of section 2303.01:
For contracts with less than 5000 tons (5000 Mg) the ~~mix design and~~ quality control shall meet the requirements of the Supplemental Specification for HMA. This directs the responsibility for ~~mix design and~~ quality control to the Engineer, but does not change the mix requirements from gyratory to Marshall, unless specified in the contract documents.

ADD: Regardless of the contract tonnage, the mix design and Job Mix Formula (JMF) shall be the responsibility of the Contractor.

Reason for revision: The Contractor already does most of the mix designs. This change is to make clear that all mix design work must be done by the Contractor as is stated in the supplemental specification. This change is also needed to coincide with the developmental specification for small quantities. Due to staffing issues, the District Labs cannot afford the large amount of time and work involved in doing mix designs for the contractor.

No industry input needed **Industry notified X** **Industry Concurrence** ☐
Industry Comments:

Specification Section Use Only:

Specification Section Recommended Language:

Replace the fourth paragraph:

For contracts with less than 5000 tons (5000 Mg) the ~~mix design and~~ quality control shall meet the requirements of the Supplemental Specification for HMA. This directs the responsibility for ~~mix design and~~ quality control to the Engineer, but does not change the mix requirements from gyratory to Marshall, unless specified in the contract documents. The Contractor shall be responsible for the mix design and Job Mix Formula (JMF), regardless of the contract quantity.

Specification Section Comments:

Final Approved Text:

Comments: The Committee had concerns about referencing a Supplemental Specification in the Specification Book or the General Specification. In this situation it may be necessary because of the Supplemental Specifications and Developmental Specifications for Local Systems and small quantities. The Interstate and Primary Road System may have quantities less than 5000 tons (5000 Mg); therefore, the small quantity developmental specification may need to added to the General Supplemental Specifications.

It was suggested that the Supplemental Specification for Marshall Mix Design on Local Systems projects remain a Supplemental Specification as this process is being phased out.

The Committee supported changing the Specification so that the Contractor is responsible for the mix design and Job Mix Formula, regardless of the contract quantity, on Interstate and Primary projects. They supported this change for the April 2003 General Supplemental Specifications but will wait until the small quantity developmental specification has been utilized on a few projects.

Specification Committee Action:

Deferred: X **Not Approved: ☐** **Approved Date** **Effective Date**

Deferred to December, 2002, meeting for the Office of Materials and Construction to review the recommended language, the Supplemental Specifications, and the Development Specifications in this area, to see if they should be added to the General Supplemental Specifications; and if any of the proposed language should be added to the Supplemental Specifications and/or the Development Specifications.

3. Article 2303.02, MATERIALS AND EQUIPMENT

The Office of Materials requests a change to Article 2303.02 that is necessary due to the changes proposed in Article 4137.02 (Item 7).

Submitted by: Kevin Jones/John Hinrichsen **Office:** Materials **Date:** 7-18-02

Proposed Effective Date: April 2003

Article No.: 2303.02A **SS No.:** **Other:**

Change (Redline/Strikeout): Change the second sentence of 2303.02A as follows: "The asphalt binder shall meet the requirements ~~in AASHTO MP1~~ of Section 4137."

Reason for revision: This change is needed to coincide with a change requested for section 4137.

No industry input needed X **Industry notified ☐** **Industry Concurrence ☐**
Industry Comments:

Specification Section Use Only:

Specification Section Recommended Language:
Replace "in AASHTO MP1" with "of Section 4137" in the second sentence.

Specification Section Comments:

Final Approved Text:

Comments:

Specification Committee Action:

Deferred: ☐ **Not Approved:** ☐ **Approved Date** Aug. 1, 2002 **Effective Date** April 29, 2003

4. Article 2316.02, MEASUREMENT

The Office of Materials requests a change to Article 2316.02 that will allow alternative types of pavement profilers to be used for determining pavement smoothness.

Submitted by: Kevin Jones **Office:** Materials **Date:** 7/18/02

Proposed Effective Date: April 2003

Article No.: 2316.02 **SS No.:** **Other:**

Change (Redline/Strikeout): Delete the first sentence of 2316.02 and replace with the following:
The Contractor shall provide and operate a California type profilograph to determine the pavement profile in accordance with Materials I.M. 341. Other types of profilographs or profilers that produce compatible results and meet the requirements of Materials I.M. 341 may be used.

Reason for revision: Advances in smoothness testing technology are resulting in a nationwide shift to light-weight non-contact profilers for construction smoothness testing. The current specification has been interpreted to allow other types of profiling equipment. The proposed change would specifically allow it and specify a procedure for acceptance.

No industry input needed X **Industry notified** ☐ **Industry Concurrence** ☐
Industry Comments:

Specification Section Use Only:

Specification Section Recommended Language:

Replace the first paragraph:

~~Smoothness shall be measured with a 25 foot (7.6 m) California type profilograph, which produces a profilogram (profile trace) of the surface tested, in accordance with Materials I.M. 341.~~
The Contractor shall provide and operate a California type profilograph to determine the pavement profile in accordance with Materials I.M. 341. Other types of profilographs or profilers that produce compatible results and meet the requirements of Materials I.M. 341 may be used.

Specification Section Comments:

Final Approved Text:

Comments: Materials I.M. 341 will include a list of alternate profilographs; and how they are accepted or rejected. Currently there are four manufacturers that are being reviewed.

These profilographs will also be allowed on bridge decks. Article 2317.02 will also require changing. The Department will perform the test on the bridge decks.

Specification Committee Action:

Deferred: ☐ **Not Approved:** ☐ **Approved Date** Aug. 1, 2002 **Effective Date** April 29, 2003

5. Article 4109.02, TESTING SIEVES
Article 4130.05, EROSION STONE OR BUTTRESS STONE

The Office of Materials requests a change to Article 4130.05 that will clear up confusion about the grading of erosion stone and how it is to be tested.

Submitted by: Kevin Jones **Office:** Materials **Date:** 6/26/02

Proposed Effective Date: April, 2003

Article No.: 4109.02, 4130.05 **SS No.:** **Other:**

Change (Redline/Strikeout): Remove the language from gradation 34 of article 4109.02 and place it in 4130.05 as follows:

4130.05 EROSION STONE OR BUTTRESS STONE.
Stone for erosion control or as a buttress shall consist of a nominal 6 inch (150 mm) mixture, by visual examination~~.~~ ,with 100 % passing the 9 inch (225 mm) screen and 100 % retained on the 3 inch (75 mm) screen. The stone shall meet the requirement of Article 4130.01~~, Gradation No. 34 of the Aggregate Gradation Table referenced in Section 4109,~~ and not more than 5% maximum mud balls.

Reason for revision: The MQRG has requested the change to clear up confusion about the grading of erosion. A gradation test is not intended for this material.

No industry input needed ☐ **Industry notified** ☐ **Industry Concurrence** ☐

Industry Comments:

Specification Section Use Only:

Specification Section Recommended Language:

4109.02, Testing Sieves

Delete Grad. No. 34:
~~34. 4130.05 {6" Cr. St.} Erosion Stone 100% passing the 9" screen - 1--% retained on the 3" sieve.~~
~~34. 4130.05 {152.4mm Cr. St.} Erosion Stone 100% passing the 228.6mm screen - 1--% retained on the 76.2mm sieve.~~

Replace "and 33" with "33, and 34" in the **Notes:** at the end of the chart.

4130.05 Erosion Stone or Buttress Stone

Replace the entire article:
Stone for erosion control or as a buttress shall consist of a nominal 6 inch (150 mm) mixture, by visual examination~~.~~, with 100 % passing the 9 inch (225 mm) screen and 100 % retained on the 3 inch (75 mm) screen. The stone shall meet the requirement of Article 4130.01~~, Gradation No. 34 of the Aggregate Gradation Table referenced in Section 4109,~~ and not more than 5% maximum mud balls.

Specification Section Comments:

Final Approved Text:

Comments: The Office of Materials has concerns over how the original specification is being interpreted. There is concern about fines in the product. The produce is examined visually. The stone is supposed to pass a 9 inch (225 mm) screen and be retained on a 3 inch (75 mm) screen. This change will clarify the requirements and the process.

Specification Committee Action:

Deferred: ☐ **Not Approved:** ☐ **Approved Date** Aug. 1, 2002 **Effective Date** April 29, 2003

6. Article 4130.01, DESCRIPTION

The Office of Materials requests a change to Article 4130.01 that will add language back in the specifications that was inadvertently deleted.

Submitted by: Kevin Jones **Office:** Materials **Date:** 7/10/02

Proposed Effective Date: April, 2003

Article No.: 4130.01 **SS No.:** **Other:**

Change (Redline/Strikeout): Add to 4130.01 under the paragraph starting, “For all projects:”. Add the following to the bottom of the list:

For Erosion Stone: 15 percent, Method C.

Reason for revision: It appears that the wording was lost during one of the reprints of the Specifications Book.

No industry input needed ☐ **Industry notified** ☐ **Industry Concurrence** ☐

Industry Comments:

Specification Section Use Only:

Specification Section Recommended Language:

Add as the 4th item in the fourth indented paragraph:
For Erosion Stone: 15%, Method C.

Specification Section Comments:

Final Approved Text:

Comments:

Specification Committee Action:
Deferred: ☐ **Not Approved:** ☐ **Approved Date** Aug. 1, 2002 **Effective Date** April 29, 2003

7. Article 4137.02, ASPHALT BINDER

The Office of Materials requests a change to Article 4137.02 that is needed to prevent serious problems reported in other States. The modification of asphalt binders with acids will neutralize the effectiveness of anti-strip agents, which may lead to early failure of Interstate and other high traffic volume surface mixtures.

Submitted by: Kevin Jones/John Hinrichsen **Office:** Materials **Date:** 7-18-02

Proposed Effective Date: April 2002

Article No.: 4137.02 **SS No.:** **Other:**

Change (Redline/Strikeout): Add a second paragraph to Section 4137.02 as follows: "Modification of asphalt binders by addition of acids will not be permitted."

Reason for revision: This change is needed to prevent serious problems reported in other States. The modification of asphalt binders with acids will neutralize the effectiveness of anti-strip agents, which may lead to early failure of Interstate and other high traffic volume surface mixtures.

No industry input needed X **Industry notified** ☐ **Industry Concurrence** ☐

Industry Comments:

Specification Section Use Only:

Specification Section Recommended Language:

Add as second paragraph:
Modification of asphalt binders by addition of acids will not be allowed.

Specification Section Comments:

Final Approved Text:

Comments:

Specification Committee Action:

Deferred: ☐ **Not Approved:** ☐ **Approved Date** Aug. 1, 2002 **Effective Date** April 29, 2003

8. Section 4155, GUARDRAIL

The Office of Design requests a change to Section 4155 that will allow the use of alternate materials to be used for guardrail blocks.

Submitted by: Mike Kennerly **Office:** Design **Date:** 7/16/02

Proposed Effective Date: 04/29/03

Article No.: 4155.04, 4155.05, 4155.06, 4155.07 (new) **SS No.:** **Other:**

Change (Redline/Strikeout):

Article 4155.04 WOOD POSTS: Wood posts shall be ~~either~~ sawed ~~wood posts or round wood posts of~~ to the dimensions shown in the contract documents~~. All posts shall~~ and meet requirements of Section 4164. ~~Spacer blocks shall meet requirements for sawed wood posts.~~

Article 4155.05 STEEL POSTS: Steel posts~~,~~ and plates~~, and spacers~~ shall be galvanized ASTM A 36/A 36 M structural steel of the dimensions shown in the contract documents. Bolt holes shall be provided and welding shall be done as indicated and in accordance with Section 2408. Galvanizing shall be done after fabrication.

Article 4155.06 SPACER BLOCKS: Wood spacer blocks shall meet requirements for wood posts. Steel spacers shall meet requirements for steel posts. Spacer blocks manufactured from alternate materials that have received FHWA approval for use on the National Highway System may be substituted for wood or steel spacer blocks.

Renumber current Article 4155.06 to 4155. 07.

Reason for revision: There are currently 29 spacer blocks made from plastic, rubber, recycled materials, composites, etc. that have gone through the necessary testing set forth in NCHRP Report 350 and have received approval for use from the FHWA for use on the NHS. At least one of these manufacturers has gone through the Product Evaluation Committee to have their product accepted for use. The Office of Design believes these spacer blocks will function as well as the wood spacer blocks we currently use, may be more durable, and should be allowed as alternates.

County or City Input Needed ☐
County or City Comments:

No industry input needed ☒ **Industry notified** ☐ **Industry Concurrence** ☐

Industry Comments:

Specification Section Use Only:

Specification Section Recommended Language:

4155.04 Wood Posts

Replace the entire article:

Wood posts shall be ~~either~~ sawed ~~wood posts or round wood posts of~~ to the dimensions shown in the contract documents~~. All posts shall~~ and meet requirements of Section 4164. ~~Spacer blocks shall meet requirements for sawed wood posts.~~

4155.05 Steel Posts

Replace the first sentence:

Steel posts~~, and~~ plates~~, and spacers~~ shall be galvanized ASTM A 36/A 36 M structural steel of the dimensions shown in the contract documents.

4155.06 Spacer Blocks

Renumber Article 4155.06 to Article 4155.07.

~~Add~~ ~~as new article:~~

~~Wood spacer blocks shall meet requirements for wood posts. Steel spacers shall meet requirements for steel posts. Spacer blocks manufactured from alternate materials that have received FHWA approval for use on the National Highway System may be substituted for wood or steel spacer blocks.~~

Specification Section Comments:

Final Approved Text:

4155.06 Spacer Blocks

Add as new article:

Wood spacer blocks shall meet requirements for wood posts. Steel spacers shall meet requirements for steel posts. Spacer blocks manufactured from alternate materials that have received FHWA approval for use on the National Highway System may be substituted for wood or steel spacer blocks. A list of approved spacer blocks is found on the World Wide Web at the following URL: http://safety.fhwa.dot.gov/fourthlevel/pro_res_road_nchrp350.htm

Comments: The Department is currently in the process of testing at the University of Nebraska spacer blocks manufactured from recycled tires.

Currently, for w-bean guardrail, steel spacers can not be used with steel posts. ~~This change will allow that.~~ **NOTE: this sentence was deleted after the minutes were published. The Methods Engineer (Will Stein) pointed out that this sentence was an incorrect statement.**

Specification Committee Action:

Deferred: ☐ **Not Approved:** ☐ **Approved Date** Aug. 1, 2002 **Effective Date** April 29, 2003